



## **I. REAL PARTY IN INTEREST**

As evidenced by the assignment recorded at Reel/Frame 010777/0619, the subject application is owned by Sun Microsystems, Inc., a corporation organized and existing under and by virtue of the laws of the State of Delaware, and now having its principal place of business at 4150 Network Circle, Santa Clara, CA 95054.

## **II. RELATED APPEALS AND INTERFERENCES**

There are no related appeals or interferences known to Appellants, Appellants' legal representatives, or assignee which will directly affect, be directly affected by, or have a bearing on the Board's decision in the pending appeal.

## **III. STATUS OF CLAIMS**

Claims 1, 3 – 8, 10 – 23, 28 – 40, and 43 – 45 are pending. Claims 2, 9, 24 – 27, 41, and 42 are canceled. Claims 1, 3 – 8, 10 – 23, 28 – 40, and 43 – 45 are rejected, and the rejection of these claims is being appealed. A copy of claims 1, 3 – 8, 10 – 23, 28 – 40, and 43 – 45 is included in the Claims Appendix attached hereto.

## **IV. STATUS OF AMENDMENTS**

Subsequent to the final rejection, amendments to claims 1, 6, 22, 23, 28, 38, 40, and 45 have been submitted. The amendments to claims 1, 6, 22, 23, 28, 38, 40, and 45 have not been acted upon by the Examiner and are not reflected in the Claims Appendix attached hereto.

## V. SUMMARY OF CLAIMED SUBJECT MATTER

Independent claim 1 is directed to a system of connected computer apparatus, comprising a programmable user processing apparatus for use by a user and at least one storage apparatus. *See, e.g.*, FIGs. 1 – 4, 9; page 9, line 11 – page 16, line 16. The storage apparatus stores data defining separate components of at least one processing application. *See, e.g.*, FIGs. 11a, 11b, 11c; page 3, lines 14 – 24; page 32, line 24 – page 36, line 19. The user processing apparatus is configured to fetch data defining components of at least one processing application to be used by the user from the storage apparatus. *See, e.g.*, FIGs. 13, 14, 21; page 3, lines 14 – 24; page 42, line 5 – page 44, line 6; page 68, line 23 – page 71, line 3. The user processing apparatus is also configured to install the components so that the components are isolated from each other and to permit operational interaction between the components in accordance with defined interaction rules to enable the application to be used by the user. *See, e.g.*, FIG. 20; page 3, line 26 – page 4, line 5; page 65, line 5 – page 68, line 21; page 77, line 1 – page 78, line 26. The user processing apparatus is configured to re-fetch data defining one or more of the components in accordance with defined rules and to use the re-fetched data for the application. *See, e.g.*, FIG. 22; page 71, line 1 – page 73, line 24. The user processing apparatus is configured to arrange and test the components to verify their authenticity and/or to verify the defined interaction rules. *See, e.g.*, FIGs. 14 – 16, 19; page 4, lines 7 – 10; page 43, line 16 – page 53, line 7; page 59, line 19 – page 65, line 3.

Independent claim 22 is directed to a system of connected computer apparatus, comprising a programmable user processing apparatus for use by a user and at least one storage apparatus. *See, e.g.*, FIGs. 1 – 4; page 9, line 11 – page 16, line 16. The storage apparatus stores data defining separate components of at least one processing application. *See, e.g.*, FIGs. 11a, 11b, 11c; page 3, lines 14 – 24; page 32, line 24 – page 36, line 19. The user processing apparatus is configured to fetch data defining components of a processing application to be used by the user from the storage apparatus. *See, e.g.*, FIGs. 13, 14, 21; page 3, lines 14 – 24; page 42, line 5 – page 44, line 6; page 68, line 23 – page 71, line 3. The user processing apparatus is also configured to install the components so

that the components are isolated from each other and to permit operational interaction between the components in accordance with defined interaction rules to enable the application to be used by the user. *See, e.g.*, FIG. 20; page 3, line 26 – page 4, line 5; page 65, line 5 – page 68, line 21; page 77, line 1 – page 78, line 26. The user processing apparatus is configured to re-fetch data defining one or more of the components in accordance with defined rules and to use the re-fetched data for the application. *See, e.g.*, FIG. 22; page 71, line 1 – page 73, line 24. The user processing apparatus is configured to arrange and test the components to verify their authenticity and/or to verify the defined interaction rules. *See, e.g.*, FIGs. 14 – 16, 19; page 4, lines 7 – 10; page 43, line 16 – page 53, line 7; page 59, line 19 – page 65, line 3. The user processing apparatus comprises a downloader for downloading data defining a plurality of separate components of a processing application from one or more external apparatus when the programmable processing apparatus is connected to the external apparatus. *See, e.g.*, FIG. 9, reference numeral 88; page 24, line 22 – page 25, line 4. The user processing apparatus also comprises an installer for installing the received components to enable the application to be used by a user. *See, e.g.*, FIG. 9, reference numeral 110; page 26, lines 22 – 24.

Independent claim 23 is directed to a storage apparatus for use in a system as described above regarding independent claim 22. *See, e.g.*, FIGs. 1 – 4; page 9, line 11 – page 16, line 16. The storage apparatus comprises a memory storing data defining at least one component of a processing application to be transmitted to a programmable user processing apparatus. *See, e.g.*, FIGs. 11a, 11b, 11c, 13, 14, 21; page 3, lines 14 – 24; page 32, line 24 – page 36, line 19; page 42, line 5 – page 44, line 6; page 68, line 23 – page 71, line 3.

Independent claim 28 is directed to a programmable processing apparatus comprising a receiver for receiving data defining a plurality of separate components to make up a processing application. *See, e.g.*, FIGs. 1 – 4, 11a, 11b, 11c; page 3, lines 14 – 24; page 9, line 11 – page 16, line 16; page 32, line 24 – page 36, line 19. The programmable processing apparatus also comprises a loader for installing the received

components to enable the application to be run. *See, e.g.*, FIG. 9; page 24, line 1 – page 27, line 4. The loader is arranged to install the components such that the components are isolated from each other and so as to permit operational interaction between the components in accordance with defined rules. *See, e.g.*, FIG. 20; page 3, line 26 – page 4, line 5; page 65, line 5 – page 68, line 21; page 77, line 1 – page 78, line 26. The apparatus further comprises a verifier for arranging and testing the components to verify their authenticity and/or to verify the defined interaction rules. *See, e.g.*, FIGs. 14 – 16, 19; page 4, lines 7 – 10; page 43, line 16 – page 53, line 7; page 59, line 19 – page 65, line 3.

Independent claim 38 is directed to a method of operating a programmable processing apparatus. The method comprises receiving data defining a plurality of separate components to make up a processing application. *See, e.g.*, FIGs. 11a, 11b, 11c, 13, 14, 21; page 3, lines 14 – 24; page 32, line 24 – page 36, line 19; page 42, line 5 – page 44, line 6; page 68, line 23 – page 71, line 3. Additionally, the method comprises installing the received components to enable the application to be run, such that the components are isolated from each other and so as to permit operational interaction between the components in accordance with defined rules. *See, e.g.*, FIG. 20; page 3, line 26 – page 4, line 5; page 65, line 5 – page 68, line 21; page 77, line 1 – page 78, line 26. The method also comprises arranging and testing the components to verify their authenticity and/or to verify the defined interaction rules. *See, e.g.*, FIGs. 14 – 16, 19; page 4, lines 7 – 10; page 43, line 16 – page 53, line 7; page 59, line 19 – page 65, line 3.

Independent claim 39 is directed to a storage device storing instructions for causing a programmable processing apparatus to become configured as an apparatus as described above regarding independent claim 28. *See, e.g.*, FIGs. 1 – 4; page 9, line 11 – page 16, line 16.

Independent claim 40 is directed to a signal conveying instructions for causing a programmable processing apparatus to become configured as an apparatus. *See, e.g.*, FIGs. 1 – 4; page 9, line 11 – page 16, line 16. The apparatus comprises a receiver for

receiving data defining a plurality of separate components to make up a processing application. *See, e.g.*, FIGs. 11a, 11b, 11c, 13, 14, 21; page 3, lines 14 – 24; page 32, line 24 – page 36, line 19; page 42, line 5 – page 44, line 6; page 68, line 23 – page 71, line 3. Additionally, the apparatus comprises a loader for installing the received components to enable the application to be run. *See, e.g.*, FIG. 9; page 24, line 1 – page 27, line 4. The loader is arranged to install the components such that the components are isolated from each other and so as to permit operational interaction between the components in accordance with defined rules. *See, e.g.*, FIG. 20; page 3, line 26 – page 4, line 5; page 65, line 5 – page 68, line 21; page 77, line 1 – page 78, line 26. The apparatus further comprises a verifier for arranging and testing the components to verify their authenticity and/or to verify the defined interaction rules. *See, e.g.*, FIGs. 14 – 16, 19; page 4, lines 7 – 10; page 43, line 16 – page 53, line 7; page 59, line 19 – page 65, line 3.

Independent claim 43 is directed to a programmable processing apparatus for use in a system as described above regarding independent claim 1. *See, e.g.*, FIGs. 1 – 4; page 9, line 11 – page 16, line 16. The programmable processing apparatus comprises means for downloading data defining a plurality of separate components of a processing application from one or more external apparatus when the programmable processing apparatus is connected to the external apparatus. *See, e.g.*, FIGs. 1 – 4, 9, 11a, 11b, 11c; page 3, lines 14 – 24; page 4, lines 12 – 14; page 9, line 11 – page 16, line 16; page 24, line 1 – page 27, line 4; page 32, line 24 – page 36, line 19. Additionally, the programmable processing apparatus comprises means for installing the received components to enable the application to be used by a user. *See, e.g.*, FIGs. 1 – 4, 9; page 4, lines 12 – 14; page 9, line 11 – page 16, line 16; page 24, line 1 – page 27, line 4.

Independent claim 44 is directed to a storage apparatus for use in a system as described above regarding independent claim 1. *See, e.g.*, FIGs. 1 – 4; page 9, line 11 – page 16, line 16. The storage apparatus comprises memory means storing data defining at least one component of a processing application to be transmitted to a programmable user processing apparatus. *See, e.g.*, FIGs. 1 – 4, 9, 11a, 11b, 11c; page 3, lines 14 – 24;

page 4, lines 12 – 14; page 9, line 11 – page 16, line 16; page 24, line 1 – page 27, line 4; page 32, line 24 – page 36, line 19.

Independent claim 45 is directed to a programmable processing apparatus comprising receiving means for receiving data defining a plurality of separate components to make up a processing application. *See, e.g.*, FIGs. 1 – 4, 9; page 9, line 11 – page 16, line 16; page 24, line 1 – page 27, line 4. The programmable processing apparatus also comprises loading means for installing the received components to enable the application to be run. The loading means is arranged to install the components such that the components are isolated from each other and so as to permit operational interaction between the components in accordance with defined rules. *See, e.g.*, FIGs. 1 – 4, 9, 20; page 3, line 26 – page 4, line 5; page 4, lines 16 – 26; page 9, line 11 – page 16, line 16; page 24, line 1 – page 27, line 4; page 65, line 5 – page 68, line 21; page 77, line 1 – page 78, line 26. Additionally, the apparatus further comprises verifying means for arranging and testing the components to verify their authenticity and/or to verify the defined interaction rules. *See, e.g.*, FIGs. 1 – 4, 9, 14 – 16, 19; page 4, lines 7 – 10; page 5, lines 1 – 5; page 9, line 11 – page 16, line 16; page 24, line 1 – page 27, line 4; page 43, line 16 – page 53, line 7; page 59, line 19 – page 65, line 3.

## **VI. GROUND OF REJECTION TO BE REVIEWED ON APPEAL**

1. Claims 1, 3 – 8, 10 – 13, 15 – 23, 28 – 32, 34 – 40, and 43 – 45 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Parthasarathy, et al. (U.S. Pat. No. 6,347,398, hereinafter “Parthasarathy”) in view of Chatterji (U.S. Pat. No. 5,664,195).
2. Claims 14 and 33 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Parthasarathy, et al. (U.S. Pat. No. 6,347,398, hereinafter “Parthasarathy”) in view of Chatterji (U.S. Pat. No. 5,664,195) and further in view of Dale, et al. (U.S. Pat. No. 6,049,664, hereinafter “Dale”).

## VII. ARGUMENT

### First Ground of Rejection:

Claims 1, 3 – 8, 10 – 13, 15 – 23, 28 – 32, 34 – 40, and 43 – 45 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Parthasarathy, et al. (U.S. Pat. No. 6,347,398, hereinafter “Parthasarathy”) in view of Chatterji (U.S. Pat. No. 5,664,195). Appellants traverse this rejection for the following reasons. Different groups of claims are addressed under their respective subheadings.

### Claims 1, 3, 4, 6, 8, 10 – 13, 19 – 23, 28 – 32, 35 – 40, and 43 – 45:

Appellants respectfully submit that Parthasarathy and Chatterji do not teach or suggest, either separately or in combination, a system comprising “wherein the user processing apparatus is configured ... to install the components so that the components are isolated from each other” as recited, in pertinent part, in Appellants’ claim 1.

Parthasarathy discloses downloading software components over a computer network. At the specific locations referred to in the Final Office Action (col. 6, lines 25 – 40), Parthasarathy discloses COM, DCOM, OLE, and ActiveX objects. COM, DCOM, OLE, and ActiveX are object-oriented programming models which specify how objects relate to each other (e.g., for providing services) through defined interfaces. However, there is no teaching or suggestion in Parthasarathy for installing components so that the components are isolated from each other.

Chatterji also fails to teach or suggest “wherein the user processing apparatus is configured ... to install the components so that the components are isolated from each other” as recited, in pertinent part, in Appellants’ claim 1. Chatterji discloses the dynamic installation of a driver on a computer system. However, Chatterji does not teach or suggest installing multiple components, and therefore Chatterji also fails to teach or suggest installing components so that the components are isolated from each other.



Additionally, Appellants respectfully submit that Parthasarathy and Chatterji do not teach or suggest, either separately or in combination, a system comprising “wherein the user processing apparatus is configured to re-fetch data defining one or more of the components in accordance with defined rules and to use the re-fetched data for the application” as recited, in pertinent part, in Appellants’ claim 1. The Final Office Action acknowledged that Parthasarathy does not teach or suggest these limitations.

Chatterji discloses the dynamic installation of a driver in a computer system. At the specific locations referred to in the Final Office Action (col. 3, line 65 – col. 4, line 13), Chatterji discloses the installation of a driver to an operating system and the downloading of the operating system including the newly installed driver. However, Chatterji does not teach or suggest re-fetching data or re-fetching in accordance with defined rules. Furthermore, there is no teaching or suggestion in Chatterji for using the re-fetched data for an application. To the contrary, Chatterji is directed to a driver and its associated operating system, neither of which is an application.

In order to establish a prima facie obviousness of a claimed invention, all claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974), MPEP 2143.03. Obviousness cannot be established by combining or modifying the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion or incentive to do so. *In re Bond*, 910 F. 2d 81, 834, 15 USPQ2d 1566, 1568 (Fed. Cir. 1990). The Final Office Action asserts that the motivation for one of ordinary skill in the art to combine Parthasarathy and Chatterji is “because being able to refetch or reload the components would make the system more dynamic.” As discussed above, neither Parthasarathy nor Chatterji teaches or suggests re-fetching data defining one or more of the components in accordance with defined rules. Therefore, Appellants can find no basis in the cited art for the motivation asserted in the Final Office Action. The art cited by the Final Office Action does not, either singly or in combination, teach or suggest all limitations of the currently pending claim 1.

Accordingly, claim 1 and its dependent claims 3, 4, 6, 8, 10 – 13, and 19 – 21 are believed to patentably distinguish over the cited references for at least the reasons given above.

Claims 22, 28, 38, 40, and 43 – 45 recite features similar to those of claim 1 and are therefore believed to patentably distinguish over Parthasarathy and Chatterji for at least the reasons given above. Dependent claims 23, 29 – 32, 35 – 37, and 39 are also believed to patentably distinguish over the art cited by the Final Office Action for similar reasons.

**Claim 5:**

Claim 5 depends on claim 1 and is therefore also believed to patentably distinguish over the art cited by the Final Office Action for the reasons given above. In addition, claim 5 recites a limitation “wherein the user processing apparatus is operable to store and reuse the data in accordance with defined rules.” None of the art cited by the Final Office Action, either singly or in combination, teaches or suggests such a limitation. At the specific locations referred to in the Final Office Action (col. 4, lines 16 – 35), Chatterji discloses testing a downloaded driver for conformance with predefined rules. However, Chatterji does not teach or suggest storing and reusing data in accordance with defined rules. Appellants therefore respectfully submit that claim 5 patentably distinguishes over the cited art.

**Claim 7:**

Claim 7 depends on claim 1 and is therefore also believed to patentably distinguish over the art cited by the Final Office Action for the reasons given above. In addition, claim 7 recites a limitation “wherein the user processing apparatus is operable to determine the first component from user instructions.” None of the art cited by the Final Office Action, either singly or in combination, teaches or suggests such a limitation. At the specific locations referred to in the Final Office Action (FIG. 6, reference numeral 98), Parthasarathy discloses finding a desired component using a Uniform Resource Locator

(URL). However, Parthasarathy does not teach or suggest any role for user instructions in finding or determining a first component. Appellants therefore respectfully submit that claim 7 patentably distinguishes over the cited art.

**Claims 15 and 34:**

Claim 15 depends on claim 1 and is therefore also believed to patentably distinguish over the art cited by the Final Office Action for the reasons given above. In addition, claim 15 recites a limitation “wherein the user processing apparatus is configured to load each component into the virtual machine using a different classloader.” None of the art cited by the Final Office Action, either singly or in combination, teaches or suggests such a limitation. At the specific locations referred to in the Final Office Action (FIGs. 4, 5, and 6), Parthasarathy discloses the downloading, verification, installation, and registration of components. However, Parthasarathy does not teach or suggest loading each component into a virtual machine using a different classloader. Appellants therefore respectfully submit that claim 15 patentably distinguishes over the cited art.

Claim 34 recites features similar to those of claim 15 and is therefore believed to patentably distinguish over Parthasarathy and Chatterji for at least the reasons given above.

**Claims 16 – 18:**

Claim 16 depends on claim 1 and is therefore also believed to patentably distinguish over the art cited by the Final Office Action for the reasons given above. In addition, claim 16 recites a limitation “wherein the user processing apparatus is configured to provide threads to run each received component, and is further configured to manage the threads such that a component can not change a thread other than one under which it is running.” None of the art cited by the Final Office Action, either singly or in combination, teaches or suggests such a limitation. At the specific locations referred to in the Final Office Action (col. 5, line 38; col. 6, lines 10 – 20), Parthasarathy discloses that each process object comprises a thread. However, Parthasarathy does not teach or suggest an apparatus which

is configured to manage threads such that a component can not change a thread other than one under which it is running. Appellants therefore respectfully submit that claim 16 patentably distinguishes over the cited art.

Claim 17 is believed to patentably distinguish over Parthasarathy and Chatterji for similar reasons. Claim 18 is dependent on claim 17 and is also believed to patentably distinguish over the art cited by the Final Office Action for at least the reasons given above.

**Second Ground of Rejection:**

Claims 14 and 33 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Parthasarathy, et al. (U.S. Pat. No. 6,347,398, hereinafter “Parthasarathy”) in view of Chatterji (U.S. Pat. No. 5,664,195) and further in view of Dale, et al. (U.S. Pat. No. 6,049,664, hereinafter “Dale”). Appellants assert that claims 14 and 33 are patentable for at least the reasons presented above regarding their respective independent claims.

### VIII. CONCLUSION

For the foregoing reasons, it is submitted that the Examiner's rejection of claims 1, 3 – 8, 10 – 23, 28 – 40, and 43 – 45 was erroneous, and reversal of the decision is respectfully requested.

The Commissioner is authorized to charge the appeal brief fee of \$500.00 and any other fees that may be due to Meyertons, Hood, Kivlin, Kowert, & Goetzel, P.C. Deposit Account No. 50-1505/5181-82200/BNK. This Appeal Brief is submitted with a return receipt postcard.

Respectfully submitted,



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## **IX. CLAIMS APPENDIX**

The claims on appeal are as follows.

1. A system of connected computer apparatus, comprising a programmable user processing apparatus for use by a user and at least one storage apparatus, the storage apparatus storing data defining separate components of at least one processing application, wherein the user processing apparatus is configured to fetch data defining components of at least one processing application to be used by the user from the storage apparatus, and to install the components so that the components are isolated from each other and to permit operational interaction between the components in accordance with defined interaction rules to enable the application to be used by the user, and wherein the user processing apparatus is configured to re-fetch data defining one or more of the components in accordance with defined rules and to use the re-fetched data for the application; and wherein the user processing apparatus is configured to arrange and test the components to verify their authenticity and/or to verify the defined interaction rules.

3. A system according to claim 1, wherein the user processing apparatus is configured to re-fetch data defining one or more of the components in accordance with user instructions and to use the re-fetched data for the application.

4. A system according to claim 1, wherein the user processing apparatus is operable to store data defining at least one of the received components after the application is shut down, and to use the stored data when the application is reused by the user.

5. A system according to claim 4, wherein the user processing apparatus is operable to store and reuse the data in accordance with defined rules.

6. A system according to claim 1, wherein the data defining each component defines any further components which are needed by the component, and wherein the user processing apparatus is configured to receive user instructions defining an application, to

determine a first component needed for the application, to fetch the first component and identify any further components required, to fetch any further components required, and to continue identifying and fetching components until all of the components for the required application have been obtained.

7. A system according to claim 6, wherein the user processing apparatus is operable to determine the first component from user instructions.

8. A system according to claim 6, wherein the user processing apparatus is operable to determine the first component from a database of components.

10. A system according to claim 1, wherein the data defining the components includes interaction rules.

11. A system according to claim 10, wherein the rules defined in the data defining components include rules defining functions within a component which will be made available to other components of a specified type.

12. A system according to claim 1, wherein the user processing apparatus is configured to install the components so that the components are isolated from resources of the user processing apparatus, and to permit access by the components to the isolated resources in accordance with defined rules.

13. A system according to claim 12, wherein the user processing apparatus is configured to route each request from a component for access to a resource to a security manager, the security manager being operable to determine whether to permit the access in accordance with pre-stored rules.

14. A system according to claim 1, wherein the user processing apparatus is provided with a virtual machine and is arranged to load each component into the virtual machine.

15. A system according to claim 14, wherein the user processing apparatus is configured to load each component into the virtual machine using a different classloader.

16. A system according to claim 1, wherein the user processing apparatus is configured to provide threads to run each received component, and is further configured to manage the threads such that a component can not change a thread other than one under which it is running.

17. A system according to claim 1, wherein the user processing apparatus is configured to provide threads to run each received component, and is further configured to manage the threads to prevent a component setting the priority of a thread above a predetermined level.

18. A system according to claim 17, wherein the user processing apparatus is configured to set the predetermined level in dependence upon the priority of the threads for running its control functions to ensure that a component cannot override a control function.

19. A system according to claim 1, wherein the user processing apparatus is configured to test received data defining a component to determine whether the component is from a given supplier.

20. A system according to claim 1, wherein the user processing apparatus is configured to test received data defining a component to determine whether the data defining the component has been changed since it was provided by the supplier.

21. A system according to claim 1, wherein the user processing apparatus is operable to use a given component in a plurality of applications.

22. A system of connected computer apparatus, comprising a programmable user processing apparatus for use by a user and at least one storage apparatus, the storage



apparatus storing data defining separate components of at least one processing application, wherein the user processing apparatus is configured to fetch data defining components of a processing application to be used by the user from the storage apparatus, and to install the components so that the components are isolated from each other and to permit operational interaction between the components in accordance with defined interaction rules to enable the application to be used by the user, and wherein the user processing apparatus is configured to re-fetch data defining one or more of the components in accordance with defined rules and to use the re-fetched data for the application; and wherein the user processing apparatus is configured to arrange and test the components to verify their authenticity and/or to verify the defined interaction rules, the user processing apparatus comprising a downloader for downloading data defining a plurality of separate components of a processing application from one or more external apparatus when the programmable processing apparatus is connected to the external apparatus; and an installer for installing the received components to enable the application to be used by a user.

23. A storage apparatus for use in a system according to claim 22, comprising a memory storing data defining at least one component of a processing application to be transmitted to a programmable user processing apparatus.

28. A programmable processing apparatus, comprising:

- a receiver for receiving data defining a plurality of separate components to make up a processing application; and

- a loader for installing the received components to enable the application to be run;

- wherein the loader is arranged to install the components such that the components are isolated from each other and so as to permit operational interaction between the components in accordance with defined rules;

- the apparatus further comprising:

- a verifier for arranging and testing the components to verify their authenticity and/or to verify the defined interaction rules.

29. Apparatus according to claim 28, wherein the loader is configured to permit operational interaction between the components in accordance with rules defined in received data defining the components.
30. Apparatus according to claim 29, wherein the rules defined in the data defining components include rules defining functions within a component which will be made available to other components of a specified type.
31. Apparatus according to claim 28, wherein the loader is configured to install the data so that the components are isolated from resources of the apparatus, and to permit access by the components to the isolated resources in accordance with defined rules.
32. Apparatus according to claim 31, wherein the loader is configured to route each request from a component for access to a resource to a security manager, the security manager being operable to determine whether to permit the access in accordance with pre-stored rules.
33. Apparatus according to claim 28, wherein the loader is arranged to install each component into a virtual machine.
34. Apparatus according to claim 33, wherein the loader is operable to install each component using a different classloader.
35. Apparatus according to claim 28, wherein the receiver is operable to receive data defining a component from a storage medium.
36. Apparatus according to claim 28, wherein the receiver is operable to receive data defining a component transmitted as a signal from an external apparatus.
37. Apparatus according to claim 28, wherein the loader is operable to use a given component in a plurality of applications.

38. A method of operating a programmable processing apparatus, comprising:  
receiving data defining a plurality of separate components to make up a processing application;  
installing the received components to enable the application to be run, such that the components are isolated from each other and so as to permit operational interaction between the components in accordance with defined rules; and  
arranging and testing the components to verify their authenticity and/or to verify the defined interaction rules.

39. A storage device storing instructions for causing a programmable processing apparatus to become configured as an apparatus as claimed in claim 28.

40. A signal conveying instructions for causing a programmable processing apparatus to become configured as an apparatus, the apparatus comprising:

a receiver for receiving data defining a plurality of separate components to make up a processing application; and

a loader for installing the received components to enable the application to be run;  
wherein the loader is arranged to install the components such that the components are isolated from each other and so as to permit operational interaction between the components in accordance with defined rules;

the apparatus further comprising:

a verifier for arranging and testing the components to verify their authenticity and/or to verify the defined interaction rules.

43. A programmable processing apparatus for use in a system according to claim 1, comprising:

means for downloading data defining a plurality of separate components of a processing application from one or more external apparatus when the programmable processing apparatus is connected to the external apparatus; and

means for installing the received components to enable the application to be used by a user.

44. A storage apparatus for use in a system according to claim 1, comprising:

memory means storing data defining at least one component of a processing application to be transmitted to a programmable user processing apparatus.

45. A programmable processing apparatus, comprising:

receiving means for receiving data defining a plurality of separate components to make up a processing application; and

loading means for installing the received components to enable the application to be run;

wherein the loading means is arranged to install the components such that the components are isolated from each other and so as to permit operational interaction between the components in accordance with defined rules;

the apparatus further comprising:

verifying means for arranging and testing the components to verify their authenticity and/or to verify the defined interaction rules.

**X. EVIDENCE APPENDIX**

No evidence submitted under 37 CFR §§ 1.130, 1.131, or 1.132 or otherwise entered by the Examiner is relied upon in this appeal.

**XI. RELATED PROCEEDINGS APPENDIX**

There are no related proceedings known to Appellants, Appellants' legal representatives, or assignee which will directly affect, be directly affected by, or have a bearing on the Board's decision in the pending appeal.

